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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/812,295	03/29/2004	Sutherland Cook Ellwood JR.	20028-7004	1807

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EXAMINER

RUDE, TIMOTHY L

ART UNIT

PAPER NUMBER

2871

MAIL DATE

DELIVERY MODE

12/24/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/812,295

Applicant(s)

ELLWOOD, SUTHERLAND COOK

Examiner

TIMOTHY RUDE

Art Unit

2871

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 October 2008.
2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 119 and 121-132 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 119 and 121-132 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/S508)
Paper No(s)/Mail Date _____
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 15 October 2008 has been entered.

Claims

Claims 111-118 and 120 are canceled by Applicant. Claim 119 is amended.
Claims 122-132 are added.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 121, 122, 125, 126, 130, and 132 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Please note Applicant's preamble (and election) is for a method of making. Therefor method steps are appropriate limitations. Use of device structure limitations in a method claim is limited to their impact on the method steps. Applicant's structural limitations are indefinite as to how they result in a method step.

For examination purposes, Applicant's structural limitations will be fully considered, but the extent to which they further limit method steps is considered very minor.

In general, the majority of limitations must be drawn to the inventive category elected. Limitations to any other inventive category, especially when they become comparable or greater in magnitude, render the claim indefinite as it is unclear which category the claim is actually drawn to, e.g., device or method.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

1. Claims 119, 121-123, 125-130, and 132 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brinkman et al [Brinkman] USPAT 6,167,169.

As to claims 7, 19, and 49, Brinkman discloses [within 117 pages, Abstract, Background of the Invention, and numerous teachings and disclosures] a large number of devices and optional means for an optical transport device, comprising:

Quote from Brinkman:

"FIELD OF THE INVENTION

(2) The present invention relates to a method and an apparatus that allows energy propagating along a primary path to be diverted sequentially through a series of energy diverting devices to a plurality of secondary paths. More particularly, this invention relates to a method and an apparatus for diverting optical energy through optical switches to the display elements or pixels of a display. The method of diverting the optical energy effectively providing a method of "scanning" of the display.

(3) This invention is applicable to any application or device that allows energy propagating along a primary path to be diverted sequentially through a series of diverting devices to a plurality of secondary paths. Such applications and uses include, but are not limited to, the provision of light shutters, optical communications, displays, scanning devices, print readers and print writers."

Example arranging outputs of a plurality of waveguide structures into a simplified 3x3 presentation matrix of Brinkman:

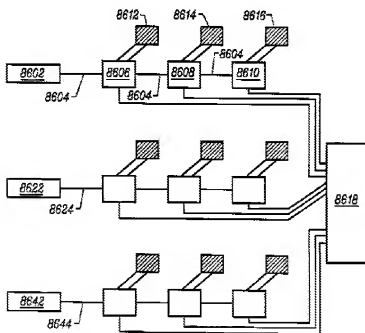


FIG. 86

Although Brinkman's style of disclosure presents a very large number of alternatives from which one of ordinary skill in the art may choose to use with high probability of success and without undue experimentation, Brinkman *might* not disclose a device and method of producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations; receiving said wave component by a transport having a core and one or more cladding layers coupled to said core; affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more cladding to produce an affected wave component; and interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal, wherein a first element for producing said wave component and a second element for interacting with said affected wave component are integrated in said transport, wherein said radiation wave is produced by a radiation source, wherein a first element for producing said wave component is a first polarizer and a second element for interacting with said affected wave component is a second polarizer, wherein said influencer applies an influencing magnetic field parallel to propagation of said radiation wave through said transport, wherein said influencer is a microcoil.

However, Brinkman teaches that one may comprise a display device to perform the method of display with a semiconductor substrate that is a semiconductor wafer [col. 5, lines 33-43]; a plurality of integrated waveguide structures supported by a top of said semiconductor wafer,

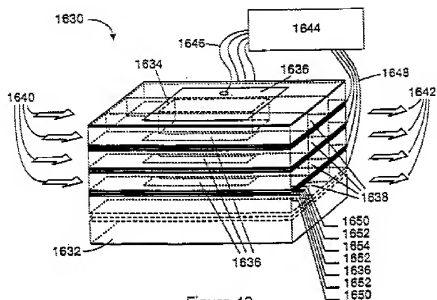


Figure 49

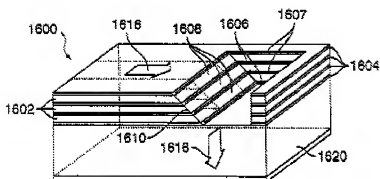


FIG. 73

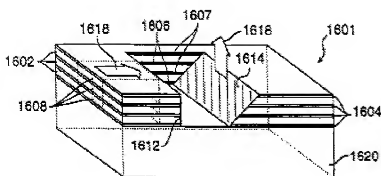


FIG. 74

each waveguide structure including a guiding channel and one or more bounding regions for propagating a radiation signal from an input to an output; and an influencer system [magnetic, col. 53, lines 12-55] responsive to a control and coupled to said waveguide structures for independently controlling an amplitude of said radiation signal at said output with means for coordinating said radiation signal amplitude control for said plurality of waveguide structures to collectively define a display system from a succession of said amplitude controlled radiation signals as art recognized means suitable for the intended purpose of comprising a satisfactory display device [MPEP 2144.07].

Brinkman is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add the use of a method of producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations; receiving said wave component by a transport having a core and one or more cladding layers coupled to said core; affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more cladding to produce an affected wave component; and interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal, wherein a first element for producing said wave component and a second element for interacting with said affected wave component are integrated in said transport, wherein said radiation wave is produced by a radiation source, wherein a first element for producing said wave

component is a first polarizer and a second element for interacting with said affected wave component is a second polarizer, wherein said influencer applies an influencing magnetic field parallel to propagation [coil around fiber] of said radiation wave through said transport, wherein said influencer is a microcoil [coil obviously needs to be small to fit optical fiber - reads on Applicant's "microcoil"] as an art recognized means suitable for the intended purpose of comprising a satisfactory display method [MPEP 2144.07].

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the method of Brinkman to include a method of producing a wave component from a radiation wave, said wave component having a polarization property wherein said polarization property is one polarization from a set of orthogonal polarizations; receiving said wave component by a transport having a core and one or more cladding layers coupled to said core; affecting said polarization property of said wave component responsive to a control signal using an influencer having at least a portion integrated with one or more cladding to produce an affected wave component; and interacting with said affected wave component wherein an intensity of said wave component is varied responsive to said control signal, wherein a first element for producing said wave component and a second element for interacting with said affected wave component are integrated in said transport, wherein said radiation wave is produced by a radiation source, wherein a first element for producing said wave component is a first polarizer and a second element for interacting with said affected wave component is a second polarizer, wherein said influencer applies an influencing magnetic field parallel to propagation of said radiation wave

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through said transport, wherein said influencer is a microcoil as an art recognized means suitable for the intended purpose of comprising a satisfactory display method [MPEP 2144.07].

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

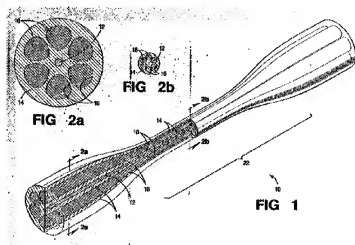
The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
 2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
2. Claims 124 and 131 are rejected under 35 U.S.C. 103(a) as being unpatentable over Brinkman, as applied to claims 119 and 121, in view of Eggleton et al [Eggleton] USPGPUB 2003/0035631 and further in view of Veligdan USPAT 7,116,873.

As to claims 124 and 131, Brinkman discloses the display method of claims 119 and 121.

Brinkman does not explicitly disclose a display method wherein each modulator further comprises a radiation source and said radiation source comprises fluorescent gas microbubbles for producing a white-balanced light in response to radio-frequency stimulation.

Eggleton teaches the use of gas filled voids (Applicant's microbubbles) to improve control of amplitude/phase (entire patent, especially Abstract, [0002], and his claims 12 and 13).



Eggleton is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add the use of gas filled voids (microbubbles) to improve control of amplitude/phase (entire patent, especially Abstract, [0002], and his claims 12 and 13).

Veligdan is evidence that ordinary workers in the art of liquid crystals would find the reason, suggestion, or motivation to add the use of a radiation source and said radiation source comprises fluorescent gas for producing a white-balanced light in

response to radio-frequency stimulation as an art recognize alternate means suitable for the intended purpose of producing the desired white-balanced light [MPEP 2144.07].

Therefore, it would have been obvious to one having ordinary skill in the art of liquid crystals at the time the invention was made to modify the display of Brinkman with the radiation source and said radiation source comprises fluorescent gas of Veligdan for producing a white-balanced light in response to radio-frequency stimulation as an art recognize alternate means suitable for the intended purpose of producing the desired white-balanced light [MPEP 2144.07].

Examiner recommends a thorough review of the substantial teachings of Brinkman, Eggleton, Veligdan (and other cited but not applied references), as they are highly relevant to the instant Application and to all related Applications.

Response to Arguments

Applicant's arguments with respect to all claims have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY RUDE whose telephone number is (571)272-2301. The examiner can normally be reached on Increased Flex Time Program.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nelms C. David can be reached on (571) 272-1787. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/TIMOTHY RUDE/
Primary Examiner, Art Unit 2871